Philips Medical Systems

NEWSLETTER **Service**

Issued by	: PMS-DMC Hamburg	**Reference No.**	: XRD Hamburg 128
Publication No.	: 4512 980 64151 REV AA	**Date**	: December 2007

Information for : FSE Managers Specialists

Avoidance of an electrical shock during service work in X-ray generators

All generators are equipped with warning labels at certain points like the capacitor bank or the converter unit to visualize the dangerous areas.

WARNING

After the generator has been switched OFF, hazardous voltages are still present at the DC intermediate circuits of the converter, the rotor control and the mA control.
These voltages are usually discharged within 2 minutes to values which are no longer dangerous.
For that reason always wait for a minimum of 2 minutes before starting any electrical work after the generator has been switched OFF.

In case one of the ENK2 main contacts is welded the converter DC discharge time is much longer as the discharging auxiliary contact ENK2 41-42 cannot be closed.
600V DC discharge time to < 60V DC normally 40 seconds.
With open contact > 11 minutes to be < 60V DC.

A sticking relay ENK2 (Optimus / Velara) or EVK2 (SCP / OMCP) results in a very long discharge time of the intermediate voltage circuit.
To avoid electrical shock during service activities it is strongly requested to check that none of the DC leading parts is still live.

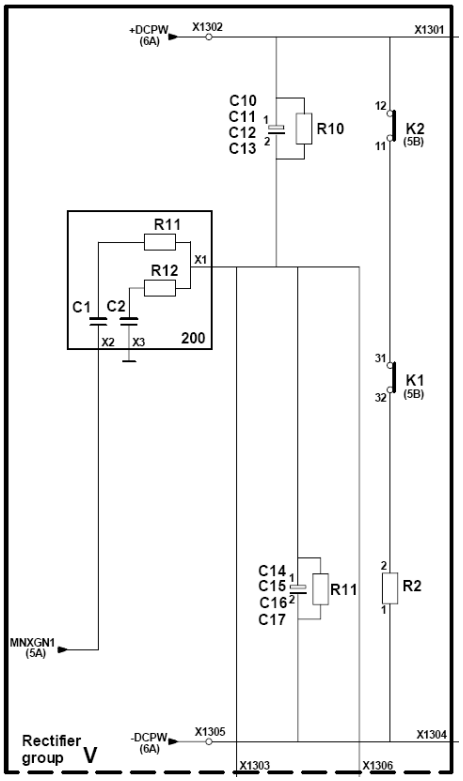
CSIP Level 1 & Proprietary Notice:
This document and the information contained in it is strictly reserved for current Philips Medical Systems ("Philips") personnel, Philips licensed representatives and Philips customers who have purchased a valid service agreement for use by the customer's designated in-house service employee on equipment located at the customer's designated site. Use of this document by unauthorized persons is strictly prohibited. This document must be returned to Philips when the user is no longer licensed and in any event upon Philips' first written request.

Liability / Warranty Disclaimer:
Philips provides this document without warranty of any kind, implied or expressed, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Philips has taken care to ensure the accuracy of this document. However, Philips assumes no liability for errors or omissions and reserves the right to make changes without further notice to any products herein to improve reliability, function, or design. Philips may make improvements or changes in the product(s) or program(s) described in this document at any time.

The Newsletter is for internal Philips use only.
Issued by Publication, Hamburg, Germany.
e-mail: helpdesk.xray.hamburg@philips.com
Phone: 0049 (0)40 5078 2369 or 2037

This document and the information contained in it is proprietary and confidential information of Philips Medical Systems ("Philips") and may not be reproduced, copied in whole or in part, adapted, modified, disclosed to others, or disseminated without the prior written permission of the Philips Legal Department.
(c) 2007 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

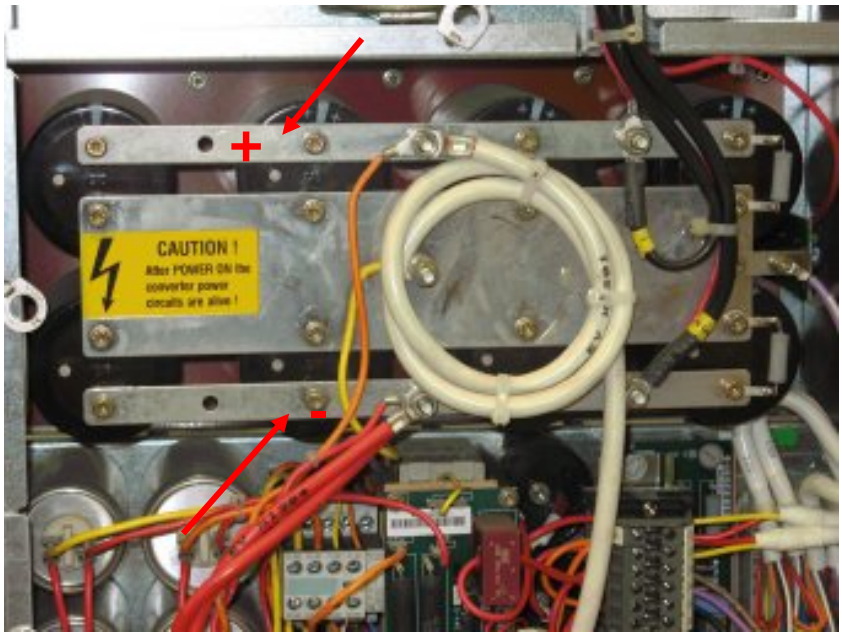
SCP 50/80/100; OMCP; Power Part



After opening the covers of the hinge rack:

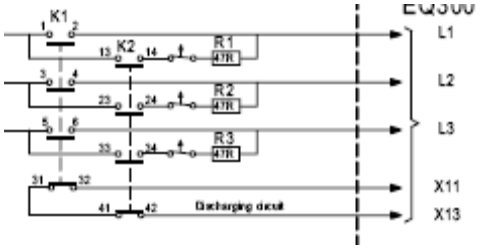
Check that all parts are voltage free.

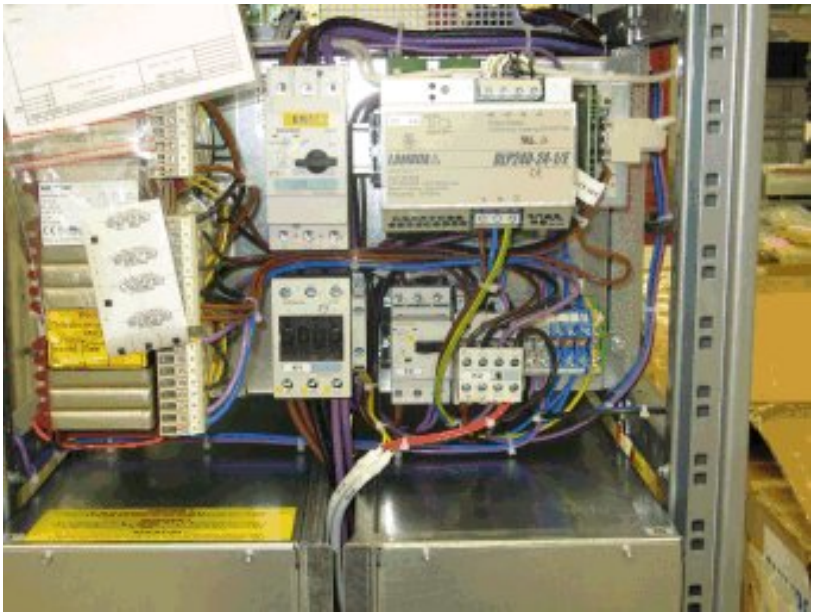
Measure the intermediate voltage to assure the voltage is below a dangerous limit of 60V **before performing any service activity**.



This document and the information contained in it is proprietary and confidential information of Philips Medical Systems ("Philips") and may not be reproduced, copied in whole or in part, adapted, modified, disclosed to others, or disseminated without the prior written permission of the Philips Legal Department.
(c) 2007 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

Velara RF / GCF/ GFD / CV / CFD / CVFD

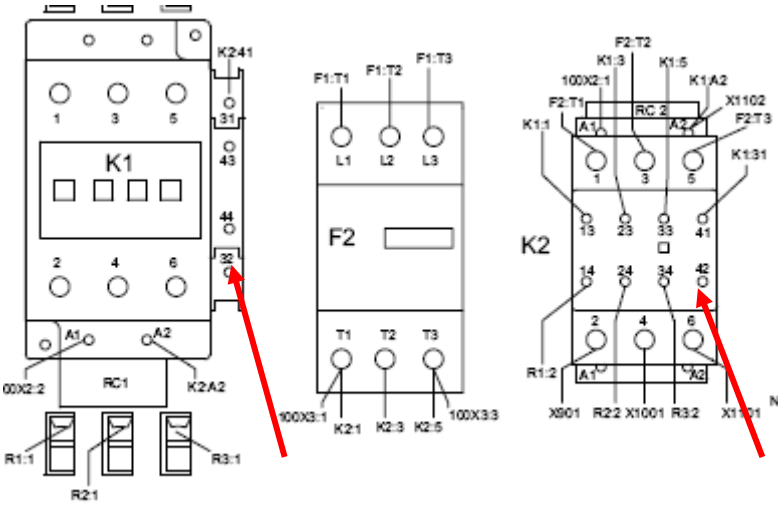




Check that all parts are voltage free.

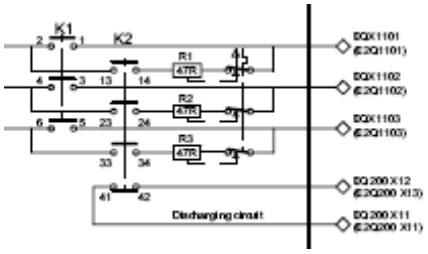
Measure the intermediate voltage to assure the voltage is below a dangerous limit of 60V **before performing any service activity**.

Measure between ENK1:32 and ENK2:42.



This document and the information contained in it is proprietary and confidential information of Philips Medical Systems ("Philips") and may not be reproduced, copied in whole or in part, adapted, modified, disclosed to others, or disseminated without the prior written permission of the Philips Legal Department.
(c) 2007 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED

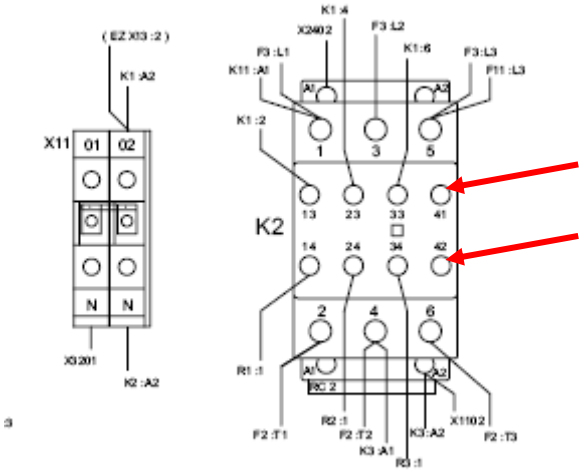
Optimus RAD / RF / C / CXA



Check that all parts are voltage free.

Measure the intermediate voltage to assure the voltage is below a dangerous limit of 60V **Before performing any service activity**.

Measure between ENK2:41 and ENK2:42.



This document and the information contained in it is proprietary and confidential information of Philips Medical Systems ("Philips") and may not be reproduced, copied in whole or in part, adapted, modified, disclosed to others, or disseminated without the prior written permission of the Philips Legal Department.
(c) 2007 Koninklijke Philips Electronics N.V.
ALL RIGHTS RESERVED